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FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

ELIMINATION REPORT
FOR
MOBIL MINING AND MINERALS COMPANY
(THE FORMER MATHIESON CHEMICAL COMPANY)
PASADENA, TEXAS

Department of Energy
Office of Nuclear Energy
Office of Remedial Action and Waste Technology
Division of Facility and Site Decommissioning Projects

CONTENTS

ELIMINATION REPORT
MOBIL MINING AND MINERALS COMPANY
(THE FORMER MATHIESON CHEMICAL COMPANY)
PASADENA, TEXAS

INTRODUCTION

The Department of Energy (DOE), Office of Nuclear Energy, Office of Remedial Action and Waste Technology, Division of Facility and Site Decommissioning Projects (and/or predecessor offices and divisions), has reviewed the past activities conducted on behalf of the Atomic Energy Commission (AEC) at the former Mathieson Chemical Company (now Mobil Mining and Minerals Company), Pasadena, Texas. A preliminary radiological survey revealed some residual contamination in a sink and drain line that exceeds current DOE radiological guidelines.[1] However, on the basis of a review of available historical information, DOE has determined that it does not have legal authority to conduct remedial actions at this site. Therefore, this site will not be included in the Formerly Utilized Sites Remedial Action Program (FUSRAP).

This report presents information on the radiological status of the site and summarizes the results of DOE's authority investigation. Although the contamination exceeds guidelines, it does not pose a measurable radiological hazard to site occupants or the general public under current conditions of site usage.

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[1] U.S. Department of Energy Guidelines for Residual Radioactivity at Formerly Utilized Sites Remedial Action Program and Remote Surplus Facilities Management Program Sites (Rev. 1, July 1985).

This elimination report will be archived by DOE through the Assistant Secretary for Management and Administration. A copy of this package will be available for public review between 8:00 a.m. and 4:00 p.m., Monday through Friday (except Federal holidays), at the DOE Public Reading Room located in Room 1E-190 of the Forrestal Building, 1000 Independence Avenue, SW., Washington, D.C.

BACKGROUND

Site Function

Mathieson Chemical Company had one of a number of research and development contracts let by AEC from mid-1951 to mid-1953 to develop processes for extracting uranium from the wet-process phosphoric acid stream of a phosphate fertilizer plant. The specific objective of the Mathieson work was to appraise the feasibility of the ammonia neutralization process developed by the Massachusetts Institute of Technology. The work included bench-scale pilot plant operations that produced less than 50 pounds of uranium.

Site Description

The site is located on the Houston Ship Channel near Pasadena, Texas. The pilot plant was located in a single 12 x 14 ft. room in a one-story building used as a process development facility and analysis laboratory. The equipment was removed after the project was completed (about 1955). The disposition of this material has not been determined. The room currently contains an L-shaped laboratory bench (with sink) running along two walls and a chemical hood located on a third wall. The room is now being used for storage of janitorial equipment.

Mathieson Chemical Company became Olin Mathieson Chemical Corporation in August 1954. In September 1969, the name was changed

to Olin Corporation. In 1979, the site was acquired by Pasadena Chemical Corporation, a subsidiary of Mobil Oil Corporation. Pasadena was absorbed by its parent company in 1983 and the name of the facility was changed to Mobil Mining and Minerals Company. The site is still used for fertilizer production.

Radiological History and Status

Oak Ridge Operations Office and Oak Ridge National Laboratory personnel visited the site on November 18, 1977. Results of this preliminary survey indicated the presence of low-level contamination in the sink and drain. Although no real exposure potential exists under present use, DOE recommended that these structures, when removed, be handled as contaminated material, and disposed of at an approved burial site. In May 1980, Pasadena Chemical Corporation indicated to DOE that the contaminated structures would be disposed of in the appropriate manner if the structure were modified.

The Texas Department of Health conducted a gamma radiation survey of the AEC pilot plant area on September 20, 1978. No contamination was found that could be attributed to the pilot plant operation.

ELIMINATION ANALYSIS

An investigation of AEC-related operations at the former Mathieson Chemical Company site in Pasadena, Texas, was conducted to determine if the site was eligible for remedial action under FUSRAP. Records of the AEC Feed Materials Division stored in Oak Ridge, Tennessee, and in Suitland, Maryland, were reviewed along with contract files. Analysis of the information collected resulted in the conclusion that the available data was insufficient to provide DOE with authority to conduct remedial action at this site (see March 8, 1984, letter, Wallo to Whitman, under References below). The contract has apparently been destroyed in accordance with standard records management procedures.

Cursory review of other records groups indicates that it is not likely that duplicates of the contract or any other supportive materials will be found in future records searches.

Some conclusions may be reached based on information and contracts relating to phosphate operations at other sites that are available. In general, the phosphate contracts were intended to support industrial research. The contractor usually owned the facilities. There was no direct AEC involvement other than review of the data. AEC had an obligation to purchase any uranium produced, but had no responsibility for the operation of the sites or their final condition. The contractors were handling the same materials they normally handled in their everyday operations and AEC provided no special guidance (other than that pertaining to uranium accountability if any was to be produced). For the same reason, AEC did not specify any requirements for cleanup.

Based on the information summarized in this report, DOE's Division of Facility and Site Decommissioning Projects has determined that it does not have authority to conduct remedial action at the former Mathieson Chemical Company if it were determined to be necessary and has eliminated the site from further consideration under FUSRAP. The Texas Department of Health has been informed of the status of the site and will oversee any remedial action taken by the site owner, Mobil Oil Corporation. The Environmental Protection Agency will also be informed of the DOE authority decision.

REFERENCES

- Kaufman, H.E. (Olin Chemicals Group), to W.E. Mott (Department of Energy), letter of April 12, 1979.

- Oak Ridge National Laboratory, "Preliminary Survey of Olin Mathieson Chemical Corporation, Pasadena, Texas," March 1980.

- Hinson, L.D. (Pasadena Chemical Corporation), to W.E. Mott (Department of Energy), letter of May 21, 1980.

- Vierzba, E.A. (The Aerospace Corporation), to W.E. Mott (Department of Energy), "Comments on the Report Entitled "Preliminary Survey of Olin Mathieson Chemical Corporation, Pasadena, Texas," July 16, 1980.

- Frangos, T.G. (Department of Energy), to S. Meyers (Department of Energy), "Designation for Remedial Action of the Pasadena Chemical Corporation (the Former Mathieson Chemical Company)" March 19, 1981.

- Mott, W.E. (Department of Energy), to L.D. Hinson (Pasadena Chemical Corporation), letter of March 27, 1981.

- Mott, W.E. (Department of Energy), to D.K. Lacker (Texas Department of Health), letter of March 27, 1981.

- Bailey, E.D. (Texas Department of Health), to W.E. Mott (Department of Energy), letter of June 29, 1981.

- Mott, W.E. (Department of Energy), to E.D. Bailey (Texas Department of Health), letter of August 11, 1981.

- Bailey, E. (Texas Department of Health), to J. Baublitz (Department of Energy), letter of December 6, 1983.

- Baublitz, J.E. (Department of Energy), to E.D. Bailey (Texas Department of Health), letter of January 26, 1984.

- Wallo III, A. (The Aerospace Corporation), to A. Whitman (Department of Energy), "Review of Material on the Pasadena Chemical Co. (sic) (Former Mathieson Chemical Co.) Site to Support DOE FUSRAP Eligibility Analysis," March 8, 1984.

Olin CHEMICALS GROUP
P.O. BOX 552 • PASADENA, TEXAS 77501 • (713) 472-3641

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April 12, 1979

Mr. William E. Mott
Acting Director
Environmental Control Technology Division
Department of Energy
Washington, D. C. 20545

Dear Mr. Mott:

The following information has been developed in line with the questionaire enclosed with your letter of March 13th, 1979 on the AEC Project at Pasadena.

1. The site is located on the Houston Ship Channel near Pasadena Texas. The mailing address is Olin Corporation, P. O. Box 552, Pasadena, Texas 77501.

2. SITE FUNCTIONS

   a.) The site was used to operate a small pilot plant which extracted uranium from wet process phosphoric acid produced for fertilizer manufacture.

   b.) The facility was operated from mid 1951 through mid 1953.

   c.) The pilot plant was operated by Mathieson Chemical Company. Project Manager was Dr. M. E. Miller. He reported administratively to the Plant Manager and functionally to Dr. Carl Prutton. (Deceased)

   d.) The contract number is unknown. All records were destroyed after legal time limits expired.

3. PHYSICAL CHARACTERISTICS

   a.) The pilot plant was located in a section of a one story building used as a process development facility.

   b.) The equipment was removed after the project was completed. The building is still standing.

c.) The area was used as a work area by Process Technology groups until June, 1975 when a new building was constructed.

d.) There were no offsite locations involved. Phosphoric acid was piped from process to the pilot plant and treated acid returned to fertilizer processing. Less than 50 pounds of yellow cake was produced. This was recycled back into the acid.

4. OWNER HISTORY

a.) Mathieson Chemical became Olin Mathieson Chemical Corporation in August of 1954. In September of 1969 it became the Olin Corporation.

5. RADIOLOGICAL HISTORY AND STATUS

a.) No radioactivity monitoring was done during the test period. None was required by the then existing regulations.

b.) The equipment which consisted of vessels, pumps, and lines was removed after completion of the project. Presumably it was scrapped. No records relating to this are available.

c.) Unknown.

d.) The contamination in the area is what would be expected in a phosphate producing plant. A survey made by Mr. Lewis M. Cook of the Texas Department of Health is enclosed.

e.) No specific decontamination was under taken at any time.

6. CATAGORY AND STATUS

a.) As indicated the building is basically idle. There are no plans to renovate or dismantle.

7. REFERENCES

a.) No records were retained. The above information was developed from conversations with some of the people involved in the project.

Please let me know if you require further clarification.

Very truly yours,

H. E. Kaufman
Manager of Governmental Affairs

HEK/cms

Texas Department of Health

Raymond T. Moore, M.D.
Commissioner

Philip W. Mallory, M.D.
Deputy Commissioner

1100 West 49th Street
Austin, Texas 78756
458-7111

March 30, 1979

E. E. Kaufman, Manager
Governmental Affairs and
Energy
Olin Chemicals Group
P. O. Box 552
Pasadena, Texas 77501

Dear Mr. Kaufman:

Thank you for coming by my office and discussing your company's views about phosphate mill tailings (gypsum).

Because our survey of the plant on September 20, 1978 was only a partial survey, we did not write a report.

We, as we discussed last September, were concerned about possible residual contamination from the old Manhattan Engineering District tests conducted there many years ago.

Mr. C. R. Meyer of our regional office and I conducted a gamma ray radiation survey in the west end of the old administration building, the areas we were told the old Manhattan project work was carried out.

We found no contamination we could attribute to that operation. Radiation levels were generally less than 30 micro/Roentgen per hour (μR/hr) in that building.

We also made a survey of the plant where we found radiation levels generally less than 30μR/hr, ranging from 10 to 600μR/hr of the pipes below a circular filter. Readings over the gypsum were around 30 - 35μR/hr.

In short, the radiation levels were not atypical of those found in other plants reported in the literature.

If you require further information or desire to discuss your plans further, please do not hesitate to call or come by.

Sincerely,

Lewis M. Cook, Chief
Environmental Surveillance
Radiation Control Branch
Division of Occupational Health
and Radiation Control

PRELIMINARY SURVEY OF
OLIN MATHIESON CHEMICAL CORPORATION
Pasadena, Texas

Work performed
by the
Health and Safety Research Division
Oak Ridge National Laboratory
Oak Ridge, Tennessee 37830

March 1980

OAK RIDGE NATIONAL LABORATORY
operated by
UNION CARBIDE CORPORATION
for the
DEPARTMENT OF ENERGY
as part of the
Formerly Utilized Sites--
Remedial Action Program

OLIN MATHIESON CHEMICAL CORPORATION
Pasadena, Texas

At the request of the Department of Energy (DOE), a preliminary survey was performed at the Olin Mathieson Chemical Corporation plant in Pasadena, Texas (see Fig. 1), on November 18, 1977, to assess the radiological status of those facilities utilized under an Atomic Energy Commission raw materials contract for a period determined to be during the early 1950s. M. S. Davenport, Plant Manager, provided information as to the nature of work performed and the location of facilities utilized. T. Cook, who worked in Quality Assurance also provided information as to the history of material processed at this site.

From information obtained from review of files of contracts and in discussions held during the survey, the work conducted at the Pasadena site involved a bench-type pilot operation designed to extract U_3O_8 from phosphoric acid generated during the processing of phosphate rock. No information was available as to the exact amounts of U_3O_8 produced nor as to the radiological conditions of the facility at the culmination of the project at which time the pilot plant was dismantled (believed to have been in 1955).

Present Use of Facilities

The facility utilized in the project consisted of a single room approximately 12 x 14 ft (see Fig. 2). This room currently contains an L-shaped laboratory bench (with sink) adjacent to two walls and a chemical hood located on a third wall. This facility was part of an old process technology and analysis laboratory. The room is currently used for storing janitorial equipment. Plans are currently underway to demolish the building.

Results of Preliminary Survey

The preliminary survey was conducted by F. F. Haywood of the Oak Ridge National Laboratory and W. T. Thornton of the Department of Energy-Oak Ridge Operations Office. An exploratory radiation survey of the one room was made. This survey consisted of (1) direct alpha and beta-gamma measurements and (2) collection of residue samples from the areas of

the sink where elevated alpha and beta-gamma readings were noted (see Fig. 3). The maximum direct alpha reading was 3000 dpm/100 cm^2 on inside surfaces of the sink and presumed to be inside the drain opening of the sink. The inside of this opening was inaccessible beyond about 15 cm, which prohibited further assessment of the contamination level. The corresponding beta-gamma dose-rate reading was about 0.4 mrad/hr at the same location and was also the highest reading found in the facility.

Analytical results of a residue sample taken from the bench area around the sink and from an inside surface of the sink are presented in Table 1. No information was obtained as to the disposition of pilot plant equipment contained in this facility following culmination of the project.

In view of survey results, when the sink and accessible drain are removed from this facility, they should be handled as contaminated material with disposal at an approved burial site, prior to the release of the site for unrestricted use.

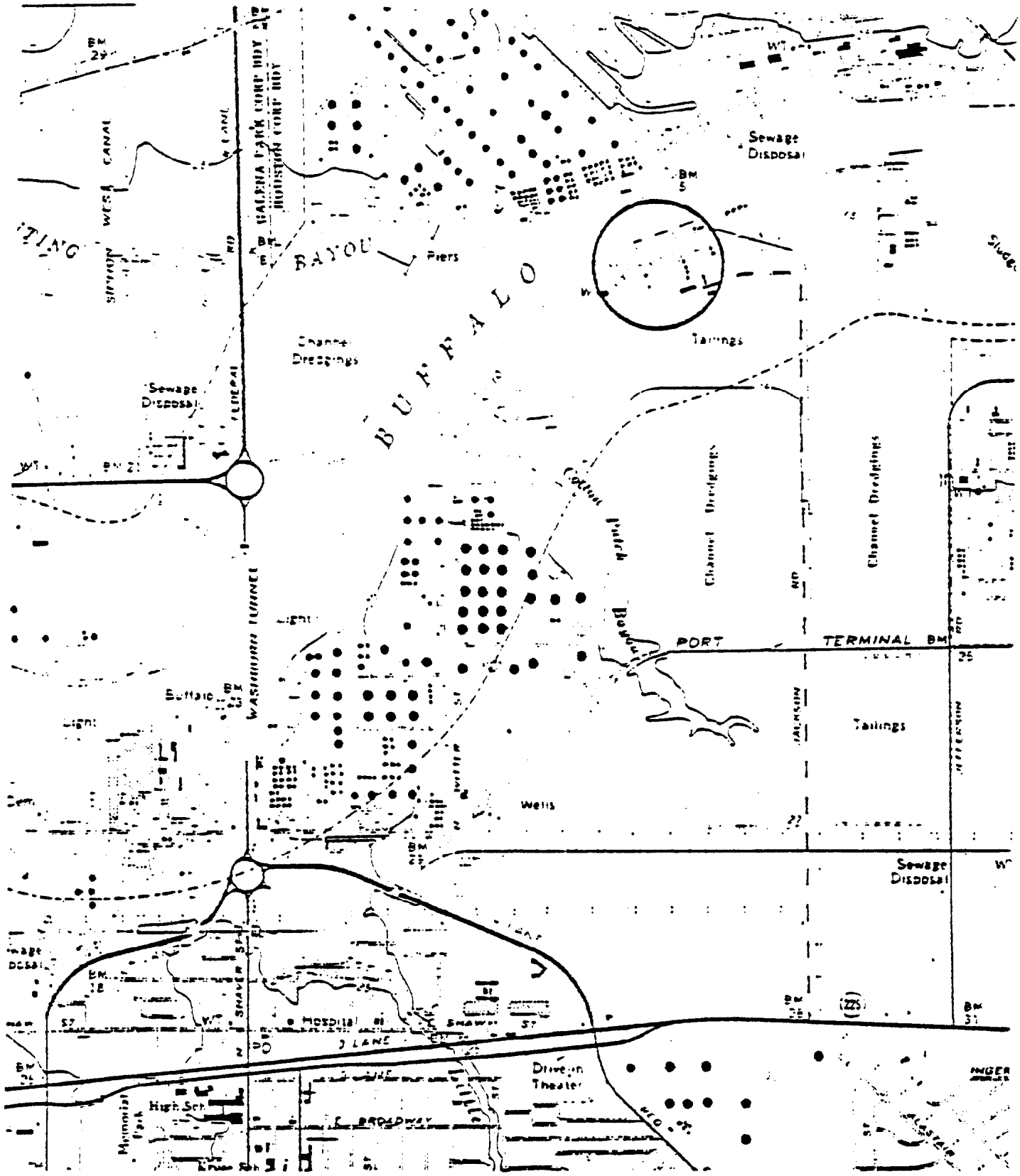
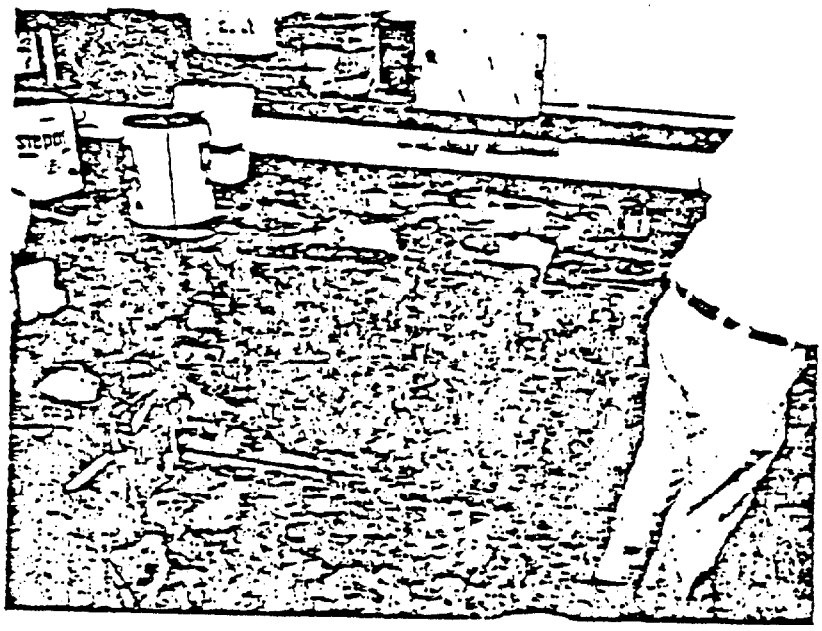


Fig. 1. Location of the Olin Mathieson Chemical Corporation in Pasadena, Texas.



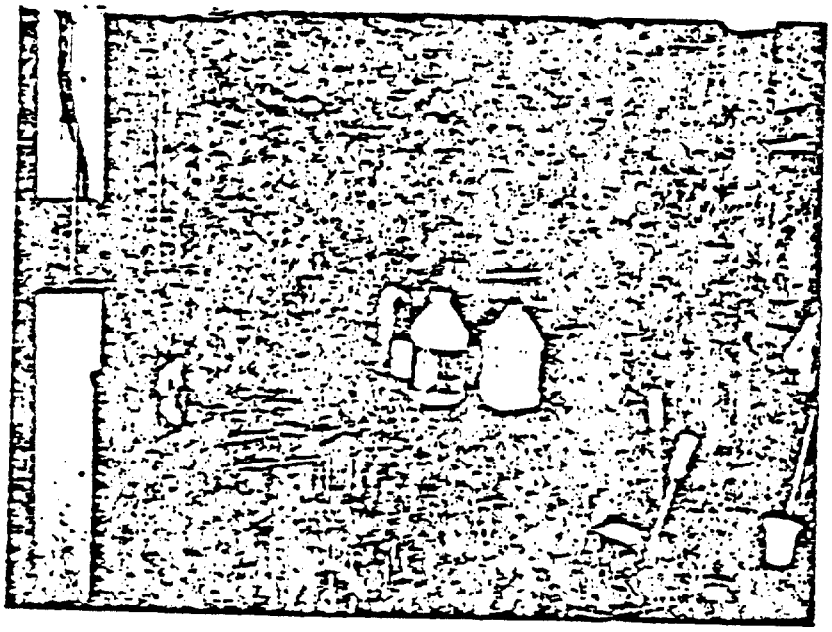


Fig. 2. Views of inside of room showing lab bench with sink and chemical hood.

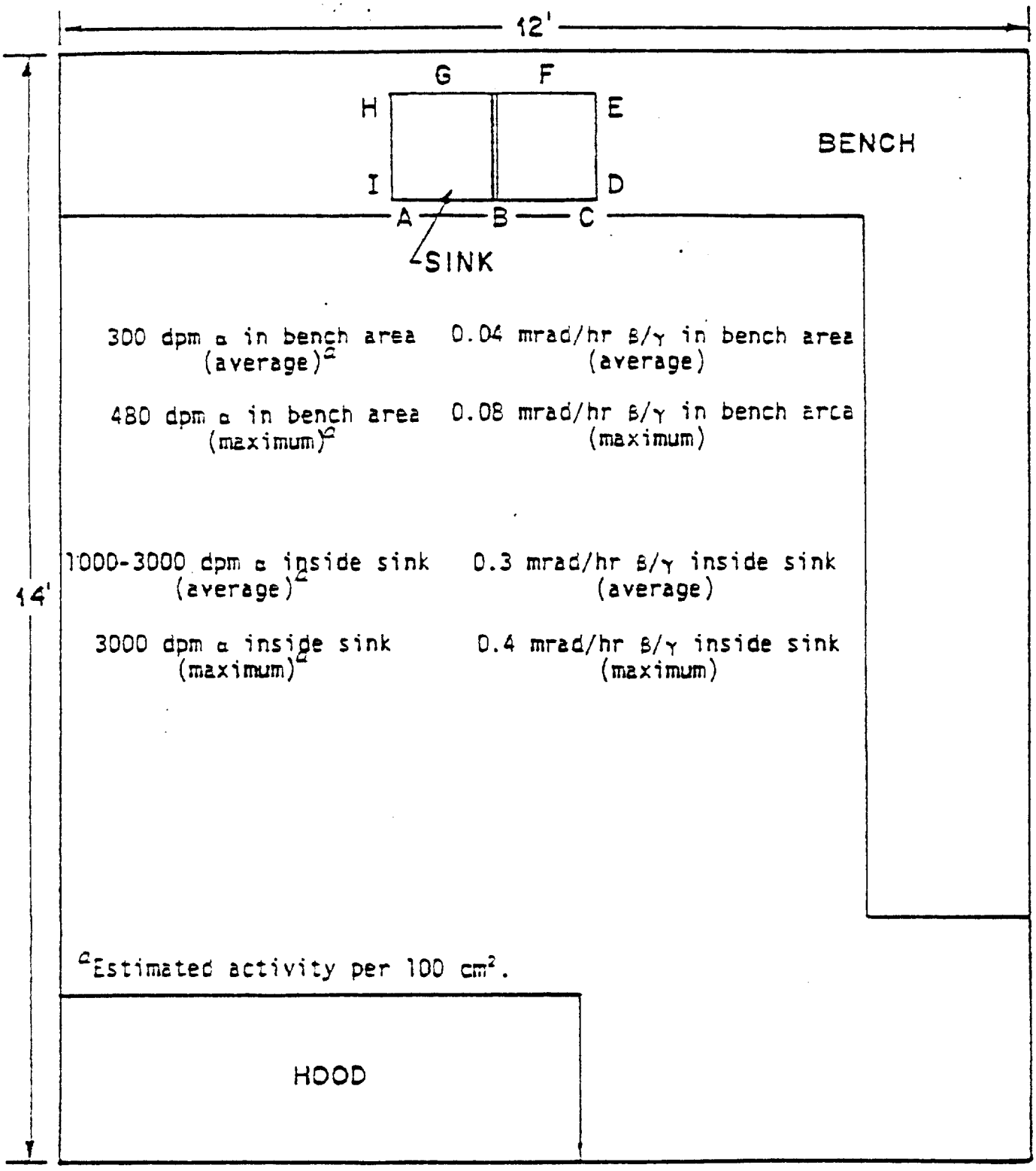


Fig. 3. Plan view of the former Olin Pilot Plant.

Table 1.

Radionuclides	Concentration for sample from bench area (pCi/g)	Concentration for sample from sink (pCi/g)
^{226}Ra	8.56	9.67
^{238}U	4.90	41.3
^{227}Ac	1.05	185

Pasadena Chemical Corporation

P.O. BOX 3447
PASADENA, TEXAS 77501
TELEPHONE (713) 472-364

May 21, 1980

Mr. William E. Mott, Director
Environmental Control
Technology Division
Office of Environment
Department of Energy
Washington, D.C. 20545

Dear Mr. Mott:

This will acknowledge receipt of your letter of May 5, 1980, transmitting the preliminary radiological data obtained by your contractor during the survey of a portion of the Pasadena Chemical Corporation (formerly Olin Corporation) plant site in March of 1980.

As recommended in the contractor's report, we will treat the pilot plant's sink and accessible drain as contaminated material and will dispose of them in an approved burial site if they are removed from the facility in the future.

Very truly yours,

PASADENA CHEMICAL CORPORATION

L. D. Hinson
Plant Manager

lm

cc: J. L. Murray, Jr.

THE AEROSPACE CORPORATION

20030 Century Blvd., Germantown, Maryland 20767, Telephone: (301) 428-2700

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16 July 1980

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Dr. William E. Mott
Acting Director
Environmental & Safety Engineering
Division
U.S. Department of Energy
Germantown, Maryland 20767

Dear Dr. Mott:

COMMENTS ON THE REPORT ENTITLED
"PRELIMINARY SURVEY OF
OLIN MATHIESON CHEMICAL
CORPORATION, PASADENA, TEXAS"

Aerospace has reviewed the letter report cited above. Our comments are attached.

In view of the fact that the State of Texas would like additional survey assistance from the Department of Energy, and in view of the minor contamination found, it is suggested that no survey be conducted until after removal of the sink and drain-line is completed.

The site is currently used, but mainly for storage purposes. Contrary to the plans at the time of the survey, there are no plans to demolish the building, according to John L. Murray, Jr., Manager of Environmental Affairs with Pasadena Chemical Corporation.

There is the possibility that this site may warrant consideration as a candidate for remedial action. It is also recommended that the State be notified of suggested restrictions regarding the removal of the sink and drain-line.

If you have any questions on the attached comments, please contact me at 428-4716.

Sincerely,

Edmund A. Vierzba
Environmental Control and Analysis
Directorate

EAV/pa
Attachment - as stated

cc: J. Counts
D. Mayhew
C. D. Jackson
A. Abriss
L. C. Brazley
R. Cooperstein
A. Whitman
R. Barber

bcc: T. Iura (w/o)
A. D. Abbott (w/o)
F. W. Hoch
R. L. Johnson (w/
S. Rosenzweig (w/
W. McNulty
J. S. Dock
A. Wallo III
C. D. Young

COMMENTS ON THE REPORT
ENTITLED "PRELIMINARY
SURVEY OF OLIN MATHIESON
CHEMICAL CORPORATION,
PASADENA, TEXAS"

The letter report is concise and well-written. A question and a comment were raised by the report.

1. Is there any explanation for the high Ac-227 concentration in the sink? The value of 185 pCi/g appears high for a phosphate operation.

2. It is not clear from the report that only the bench, drain-line and sink were found to have surface contamination above background. It should be stated that the floor and walls were found within typical background levels, if such is the case.

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EP-141

Designation for Remedial Action of the Pasadena Chemical Corporation (the Former Mathieson Chemical Company)

Sheldon Meyers, NE-30

The former Mathieson Chemical Company, Pasadena, Texas (presently called Pasadena Chemical Corporation), is hereby designated for remedial action under the Formerly Utilized Sites Remedial Action Program. We note that this facility was utilized under an Atomic Energy Commission (AEC) contract for a period during the early 1950's; however, we have not been able to locate the contract. Because it has not been established that the contamination present is a result of work done under the AEC contract, it does not appear that the Department has the authority under existing legislation to conduct remedial action. If our ongoing record search should result in any additional information on this facility we will notify you.

In view of the location and magnitude of the contamination involved, we recommend that if remedial action is taken at the facility it be given a low priority. Attached for your use is a preliminary survey of the facility and a letter from the plant manager in which he commits to treating the plant's sink and drain (only contamination found during the survey) as contaminated material. We are notifying the Texas Department of Health of the situation at the facility and recommending that they assume responsibility for its regulation.

signed

Thomas G. Frangos, Director
Office of Environmental
Compliance and Overview (EP-10)

2 Attachments

cc: Fred Haywood, ORNL
William Bibb, OR
~~Robert W. Ramsey, NE-301~~

bcc: Steve Miller, GC-34
Aerospace

EP-141:GPTuri:dr:353-2766:3/11/81:DF-92

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B 3052

MAR 27 1981

Mr. L. D. Hinson
Plant Manager
Pasadena Chemical Corporation
P. O. Box 3447
Pasadena, Texas 77501

Dear Mr. Hinson:

I acknowledge receipt of your letter of May 21, 1980, and your intention to treat the pilot plant's sink and drain as contaminated material. Based on the radiological survey conducted at the facility under the Formerly Utilized Sites Remedial Action Program, the Department of Energy has determined that your facility should be considered for remedial action. However, we cannot locate the original contract and therefore are not able to establish that the contamination present at the facility is a result of work done under the Atomic Energy Commission contract. Consequently, it does not appear that the Department has the authority under existing legislation to conduct remedial action. We will inform you if our ongoing record search results in significant additional information or if legislation is enacted into law which would give the Department authority to conduct remedial action. In the meantime, we have informed the Texas Department of Health of the radiological status of your facility (see enclosed letter). Should you have any questions, please contact Gale Turi (301-353-2766) of my staff or myself (301-353-3015).

Sincerely,

Original signed by

William E. Mott, Director
Environmental and Safety
Engineering Division (EP-14)
Office of Environmental Protection,
Safety, and Emergency Preparedness

Enclosure
bcc: R. W. Ramsey, NE-301
Steve Miller, GC-34
Aerospace

EP-141:GPTuri:dr:353-2766:3/11/81:DF-92

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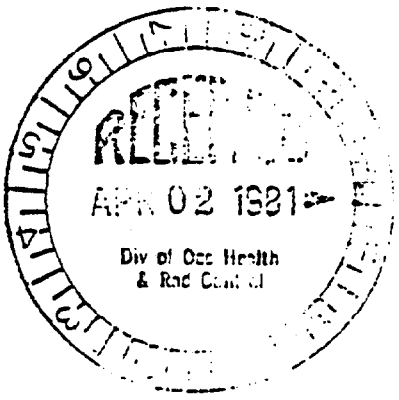
Department of Energy
Washington, D.C. 20545

MAR 27 1981



Mr. David K. Lacker, Director
Division of Occupational Health
and Radiation Control
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756

Dear Mr. Lacker:

On April 4, and October 30, 1980, I transmitted information to you on the Pasadena Chemical Corporation (the former Mathieson Chemical Company) and the Department of Energy Program for sites formerly used by the Manhattan Engineer District and Atomic Energy Commission (AEC) in the Nation's nuclear energy program. Based on the enclosed radiological survey report of the Pasadena Chemical Corporation site, the Department has determined that the facility should be considered for remedial action.

The Mathieson Chemical Company was operated under an AEC contract in the early 1950's; however, we are unable to locate the contract. Because it has not been established that the residual radioactive material present at the facility is a result of work performed under the AEC contract, it does not appear that the Department has the authority under existing legislation to conduct remedial activities. Accordingly, we recommend that the Texas Department of Health assume responsibility for regulating the residual radioactive material at the facility.

Please contact Gale Turi (301-353-2766) of my staff or myself (301-353-3016) for any further discussion of this matter that you feel necessary.

Sincerely,

William E. Mott, Director
Environmental and Safety
Engineering Division (EP-14)
Office of Environmental Protection,
Safety, and Emergency Preparedness

Enclosure

Aerospace

Texas Department of Health

Robert Bernstein, M.D., F.A.C.P.
Commissioner

1100 West 49th Street
Austin, Texas 78756
(512) 458-7111

Robert A. MacLean, M.D.
Deputy Commissioner

June 29, 1981 TX.1

BJ222

Mr. William E. Mott, Director
Environmental and Safety
Engineering Division (EP-14)
Office of Environmental Protection,
Safety, and Emergency Preparedness
Department of Energy
Washington, D.C. 20555

Dear Mr. Mott:

Thank you very much for your letter of March 27, 1981, to David K. Lacker regarding the Pasadena Chemical Corporation (the former Mathieson Chemical Company) site.

We are disturbed that you feel that this site is not eligible for Department of Energy (DOE) remedial activities. It is our opinion that the contamination present at the site is a direct result of the Federal government's nuclear energy program conducted under the auspices of the Manhattan Engineer District (MED) and the Atomic Energy Commission (AEC). The Preliminary Survey attached to your letter clearly reflect the presense of radionuclides that one would expect to be associated with an uranium recovery facility of that time period.

Historical documents and interviews indicate that the pilot uranium recovery unit and associated support facilities were phased out around 1955, about 8 years before the State of Texas assumed regulatory control over radioactive materials in 1963. A review of our license files indicates that Texas Radioactive Material License No. 4-742 was issued on September 23, 1964, based upon an application from the company dated June 3, 1964. This license was for the possession and use of a 500 millicurie Cesium-137 sealed source in a Nuclear Chicago Corporation gauge. At no time from then until the license was terminated on August 19, 1981, was any other radionuclide authorized by Texas license.

Based upon our investigation of this site, we cannot help but conclude, even in the absence of copies of contracts between MED or AEC and Mathieson Chemical Company, that the radioactive contamination measured at the facility exists as a result of the contact work performed by Mathieson Chemical Company for MED/AEC. Therefore, we cannot accept your implied conclusion that DOE has no responsibility for remedial action at the site. We fail to see how the inability to locate paperwork can in any way relieve DOE of its legal responsible (or authority) to conduct remedial action activities at this site.

Although we disagree with you about who is responsible for remedial action at this site, we are prepared to work with DOE and the company in every way we can to get the site decontaminated as soon as possible.

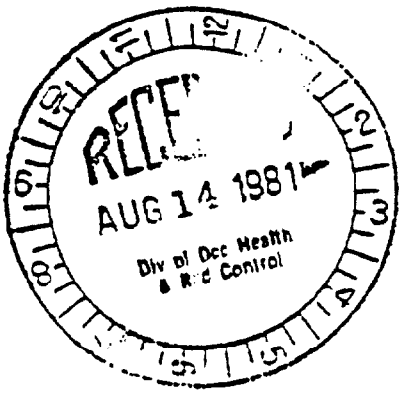
Sincerely,

Edgar D. Bailey, P.E., Director
Division of Licensing, Registration
and Standards

cc: G. Wayne Kerr, USNRC
M. S. Davenport, Pasadena Chemical Corporation

Department of Energy
Washington, D.C. 20545

AUG 11 1981



Mr. Edgar D. Bailey, Director
Division of Licensing,
Registration and Standards
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756

Dear Mr. Bailey:

This is in response to your June 29, 1981, letter regarding the Pasadena Chemical Corporation site (the former Mathieson Chemical Company). Of interest to you, this site was designated for remedial action under the Department's Formerly Utilized Sites Remedial Action Program on March 19, 1981, because of the possibility that residual radioactive material found at the facility was a result of work performed under an Atomic Energy Commission contract.

The Office of the General Counsel has reviewed the information in your June 29th letter. It has reaffirmed its position that the Department does not have the authority to conduct remedial activities until additional legislation is passed by the Congress. As we stated in our March 27, 1981, letter, we are unable to establish conclusively that the residual radioactive material present at the facility is or is not a result of work performed under the Atomic Energy Commission contract. Further, without the contract, we cannot establish whether the Government-controlled operations at the site included responsibility for removal of residual radioactive material.

I am forwarding a copy of your letter to Mr. Robert W. Ramsey, Jr., the Remedial Action Program Project Leader, in the Office of Nuclear Energy. Mr. Ramsey is responsible for the conduct of the Department's remedial activities. You may wish to discuss the Pasadena Chemical Corporation situation with him (301-353-5272) or with Mr. Steven Miller (202-252-6947) of the Office of General Counsel.

Sincerely,

William E. Mott
Office of Operational
Safety (EP-32)

cc: R. W. Ramsey, NE-30.1, USDOE

Texas Department of Health

Robert Bernstein, M.D., F.A.C.P.
Commissioner

1100 West 49th Street
Austin, Texas 78756
(512) 458-7111

Radiation Control
(512) 835-7000

Robert A. MacLean, M.D.
Deputy Commissioner
Professional Services

Hermas L. Miller
Deputy Commissioner
Management and Administration

December 6, 1983

Mr. John Baublitz, Director
Division of Remedial Action Projects
Assistant Secretary for Nuclear Energy (NE-24)
Department of Energy
Washington, D.C. 20545

Dear Mr. Baublitz:

We have noted with interest that the Pasadena Chemical Company, Pasadena, Texas, has been mentioned in connection with the Formerly Utilized Sites Remedial Action Program (FUSRAP) in two recent reports: Spent Fuel and Radioactive Waste Inventories, Projections, and Characteristics (DOE/NE-0017/2) and Report on the Follow-Up Inspection of the Formerly Utilized Sites Remedial Action Program (DOE/IG-0199).

From a series of letters between this Bureau and William E. Mott on March 27, 1981, June 29, 1981, and August 11, 1981, (copies attached), we had been led to believe that the Pasadena Chemical Company had been dropped from consideration in connection with FUSRAP. We are very happy to see that it has not.

We appreciate an update on the current status of and plans for this site and any guidance you can provide in regard to what activities this Bureau should be taking in connection with the site.

Sincerely,

Edgar D. Bailey, P.E., Director
Division of Licensing, Registration
and Standards
Bureau of Radiation Control

Enclosures

cc: M. S. Davenport, Pasadena Chemical Company

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JAN 26 1984

Mr. Edgar D. Bailey, Director
Division of Licensing, Registration
and Standards
Bureau of Radiation Control
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756

Dear Mr. Bailey:

I am replying to your letter of December 6, 1983, relative to maintaining the Pasadena Chemical Company, Pasadena, Texas, in the Formerly Utilized Sites Remedial Action Program (FUSRAP). Dr. Mott's letters of March 27, 1981, and August 11, 1981, stated that, although the site was "designated" for remedial action on March 19, 1981 (that is, it should be considered for remedial action), the Department of Energy's (DOE) Office of General Counsel concluded from review of available records that there is insufficient documentation to provide us the necessary authority to conduct remedial action at the site. Therefore, DOE has no plans to conduct remedial action at the Pasadena Chemical Company site.

The reports that you mentioned in your letter were based on out-of-date information, and included some sites, such as the Pasadena Chemical Company, where DOE cannot establish authority based on documentation, but which were included in a draft legislative proposal for congressional authorization prepared by DOE. This draft legislation is no longer being proposed for submittal to Congress. Therefore, we suggest that the State of Texas, Department of Health, should take the appropriate action to remove the radioactive contamination from this site. It appears that removal and disposal of the contaminated sink and drains as low-level radioactive waste would be the appropriate course of action to take to rectify the situation. The DOE will provide technical advice to the State on the cleanup, if you wish. Please call Mr. Arthur J. Whitman of my staff (301-353-5439) if there are any technical questions, or contact Mr. Steven Miller (202-252-6947) of the Office of General Counsel, regarding the question of authority.

Sincerely,

NE-24:AWhitman:ph:353-5439:1/24/84:AW39:
3.43.1

Original signed by
J. E. Baublitz
John E. Baublitz, Director
Division of Remedial Action Projects
Office of Terminal Waste Disposal
and Remedial Action
Office of Nuclear Energy

bcc:
S. Miller, GC-34 *Comments included
E. Keller, OR
A. Whitman, NE-24
Aerospace

NE-73 (4)
NE-24 RF
Whitman RF

TX 1.

THE AEROSPACE CORPORATION

Suite 4000, 955 L'Enfant Plaza, S.W., Washington, D.C. 20024 Telephone (202) 488-6000

7086-01.84.aw.12
8 March 1984

Mr. Arthur Whitman
Office of Nuclear Energy, NE-24
Division of Remedial Action
U.S. Department of Energy
Germantown, Maryland 20545

Dear Mr. Whitman:

REVIEW OF MATERIAL ON THE PASADENA CHEMICAL CO. (FORMER MATHIESON CHEMICAL CO.) SITE TO SUPPORT DOE FUSRAP ELIGIBILITY ANALYSIS

Enclosed please find a summary report prepared to support your determination of eligibility or ineligibility for FUSRAP of the former Mathieson Chemical Co. site in Pasadena, Texas. The material reviewed and collected to date contains insufficient information to support inclusion and based upon efforts to identify additional data, it appears that it is not likely that any material supporting inclusion in FUSRAP will be identified in the future. If it is determined by your office that this site is not eligible for FUSRAP, I believe we should meet to discuss the next step in notifying the appropriate parties.

As you know, Mr. Miller and you have reviewed a preliminary draft of the enclosure. Mr. Miller has given tentative approval of this version. Please contact me with comments or questions concerning this material.

Sincerely,

Andrew Waffo III - Project Engineer
Environmental Controls and Analysis
Directorate
Eastern Technical Division

AW:sj
Enclosure
cc: J. Baublitz
E. DeLaney
J. Jennings (w/o)
S. Miller

bcc: H. Bauer
B. Fritz
F. Hoch
T. Iura (w/o)
M. Jennison
R. Johnson (w/o)
P. Martino
F. Newman (w/o)
C. Young

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM INELIGIBILITY REPORTS

PASADENA CHEMICAL COMPANY, PASADENA, TEXAS

CONTENTS

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM INELIGIBILITY REPORT

FORMER MATHIESON CHEMICAL COMPANY (PASADENA CHEMICAL), PASADENA, TEXAS

Introduction and Summary

An investigation of AEC-related operations at the former Mathieson Chemical Company site in Pasadena, Texas, was conducted to determine if the site was eligible for remedial action under FUSRAP. Records of the AEC Feed Materials Division stored in Oak Ridge, Tennessee, and in Suitland, Maryland, were reviewed along with contract files. The analysis of information collected indicated there was insufficient data identified to provide DOE authority to conduct remedial action at this site. Cursory review of other records groups further indicates that it is not likely that the contract or any other supportive materials will be found in future records searches.

Reason for Investigation

The Mathieson Chemical Company site was identified as an AEC contractor during initial FUSRAP investigations. The site was investigated to determine if it qualified for remedial action.

Background on Mathieson Chemical Company (Pasadena Chemical)

Mathieson Chemical Company had a research and development contract from mid-1951 to mid-1953 with AEC to develop a process for extracting uranium from the phosphoric acid stream of a phosphate fertilizer plant. The contract included bench-scale pilot plant operations and produced less than 50 pounds of uranium. A few memoranda exist that discuss the project or contract but it appears the contract has been destroyed.

The site is located on the Houston Ship Channel near Pasadena, Texas. The pilot was located in a single room in a one-story building used as a process development facility and analysis laboratory. The equipment was removed after the project was completed (about 1955). The room currently contains an L-shaped laboratory bench (with sink) running along two walls and a chemical hood located on a third wall. The room is now being used for storage of janitorial equipment.

Mathieson Chemical Company became Olin Mathieson Chemical Corporation in August 1954. In September 1969, the name changed to Olin Corporation. The site is now owned by Pasadena Chemical Corporation.

Oak Ridge Operations Office and Oak Ridge National Laboratory personnel visited the site on November 18, 1977. Results of this preliminary survey indicated the presence of low-level contamination in the sink and drain. Although no real potential for exposure to persons under present use exists, it is recommended that these structures, when removed, be handled as contaminated material, and disposed of at an approved burial site.

The Texas Department of Health conducted a gamma ray radiation survey of the old Atomic Energy Commission pilot plant area on September 20, 1978. No contamination was found that could be attributed to the pilot plant operation.

The current owner of the facility has indicated to DOE that the contaminated structures will be disposed of in the appropriate manner if the structure is modified. The Department of Energy (DOE) has notified the State of Texas of the findings at this site.

Analysis

Only minimal records on this site were identified. The data reviewed to date does not indicate that DOE predecessor agencies had any responsibility for this site other than supplying some supplemental funds for the development of a process to extract uranium from phosphoric acid. No contract for this operation

has been identified. It appears the process under development belonged to Mathieson and it does not appear that it was developed beyond the research and development (R&D) stage. Contamination found on the site could be the result of the process R&D work because it is higher in uranium than in radium as would be expected from the process being developed.

Factors Required for Inclusion

During records searches and analysis to support DOE determinations regarding authority for remedial action, the need for and pertinence of specific materials are assessed considering five questions used by DOE in an authority review. A summary of the questions and implications of the data collected to date with regard to the questions are provided below.

1. Was the site/operation owned by a DOE predecessor or did a DOE predecessor have significant control over the operations or site?

   The site was not owned, operated or controlled by DOE predecessors.

2. Was a DOE predecessor agency responsible for maintaining or ensuring the health and safety and environment at the site (i.e., were they responsible for cleanup)?

   There is no evidence to indicate DOE was responsible for site health, safety, or cleanup.

3. Is the waste, residual, or radioactive material on the site the result of DOE predecessor related operations?

   It cannot be conclusively determined that the contamination in the drains resulted from AEC contract work; however, it is possible.

4. Is the site in need of further cleanup and was the site left in unacceptable condition as a result of DOE predecessor related activities?

   Drains are contaminated with uranium and its daughter products in excess of NRC guidelines for surface contamination at facilities released for unrestricted use; however, they presently pose no health hazard.

5. Did the present owner accept responsibility for the site with knowledge of its contaminated condition and that additional remedial measures are necessary before the site is acceptable for nonrestricted use by the general public?

There is insufficient data to assess the current owner's responsibility for any remedial measures if needed.